

translation

509, 858

PCT/EP2003/004501

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 40 890.h.sev	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/004501	International filing date (day/month/year) 30 April 2003 (30.04.2003)	Priority date (day/month/year) 29 May 2002 (29.05.2002)
International Patent Classification (IPC) or national classification and IPC B21B 29/00		
Applicant SMS DEMAG AKTIENGESELLSCHAFT		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
These annexes consist of a total of _____ sheets.

- This report contains indications relating to the following items:
 - I ☒ Basis of the report
 - II ☐ Priority
 - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - IV ☐ Lack of unity of invention
 - V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - VI ☐ Certain documents cited
 - VII ☐ Certain defects in the international application
 - VIII ☐ Certain observations on the international application

Date of submission of the demand 05 December 2003 (05.12.2003)	Date of completion of this report 04 February 2004 (04.02.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/004501

I. Basis of the report

1. With regard to the elements of the international application:*

- ☐ the international application as originally filed
- ☒ the description:
pages _____ 1-6 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-3 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1/2-2/2 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
pages _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International Publication No.
PCT/EP 00/04501

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-3	YES
	Claims		NO
Inventive step (IS)	Claims	1-3	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-3	YES
	Claims		NO

2. Citations and explanations

1. Reference is made to the following documents:

D1: DE 1 281 981 B

1. Claim 1 is at least in part unclear (PCT Article 3):

1.1 The characterising portion of this claim develops the feature of an "axial steady bearing" which has previously not been defined any more precisely. The preamble talks merely of a steady bearing.

1.2 The feature "an intermediate housing (ZG) that is cylindrical and streamlined with respect to the axial steady bearing" in the characterising portion can only be understood with reference to the figures and the description (see in particular page 3, line 16).

1.3 The comments pertaining to novelty and inventive step are therefore based on the assumption that the wording of the claims is clarified as per the following observations (see point 2). The amendments introduced are shown in bold and underlined font:

Device for influencing in a controlled manner the load-bearing forces of pressure rolls, in particular back-up rolls (SW) mounted on working rolls, wherein the journals (WZ) of said back-up rolls which are situated in roller bearings or plain bearings in a bearing support housing or the fitment of the rolls of a roll stand have a stub (ZA) which is supported in an axial steady bearing whose bearing housing (LG) is placed on the outside of the bearing support housing of the pressure rolls or the fitment of the back-up rolls (LS), characterised in that an intermediate housing (ZG) inserted into the bearing housing (LG), **cylindrically surrounding** the axial steady bearing and being contacted by a piston cylinder unit (RB, SK) can be displaced in the bearing housing radially to the axis of the journal projection (ZA).

2. A thus clarified **claim 1** is novel for the following reasons (PCT Article 33(2)):

Document D1 discloses a:

Device for influencing in a controlled manner the load-bearing forces of pressure rolls, in particular back-up rolls (16) situated on working rolls (14), wherein the journals (see figure 2) of said back-up rolls which are situated in roller bearings or plain bearings in a bearing support housing or the fitment (17) of the rolls of a roll stand have a stub (see figure 2) which is supported on an axial steady bearing (see figure 2) whose bearing housing (20) is placed on the outside of the bearing support housing of the pressure rolls or the fitment of the back-up

rolls (16).

The subject matter of **claim 1** differs from **D1** in that:

- (i) an intermediate housing inserted into the bearing housing, cylindrically surrounding the axial steady bearing and being contacted by a piston cylinder unit can be displaced in the bearing housing radially to the axis of the journal stub.
3. The features as per (i) solve in a non-obvious manner the problem of designing the entire device such that it is lower and therefore lighter (PCT Article 33(3)).
 4. Dependent **claims 2 to 3** constitute further embodiments of the subject matter of **claim 1** and therefore likewise meet the PCT novelty and inventive step requirements (PCT Article 33(2) and (3)).
 5. There are no doubts as to the industrial applicability of the subject matter of **claims 1 to 3** (PCT Article 33(4)).

VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES PATENTWESEN

PCT

INTERNATIONALER VORLÄUFIGER PRÜFUNGSBERICHT (Artikel 36 und Regel 70 PCT)

REC'D 06 FEB 2004



Aktenzeichen des Anmelders oder Anwalts 40 890.h.nb	WEITERES VORGEHEN siehe Mitteilung über die Übersendung des internationalen vorläufigen Prüfungsberichts (Formblatt PCT/PEA/446)	
Internationales Aktenzeichen PCT/EP 03/04501	Internationales Anmeldedatum (Tag/Monat/Jahr)	Prioritätsdatum (Tag/Monat/Jahr) 29.05.2002
Internationale Patentklassifikation (IPK) oder nationale Klassifikation und IPK B21B29/00		
Anmelder SMS DEMAG AKTIENGESELLSCHAFT et al.		

1. Dieser internationale vorläufige Prüfungsbericht wurde von der mit der internationalen vorläufigen Prüfung beauftragten Behörde erstellt und wird dem Anmelder gemäß Artikel 36 übermittelt.
2. Dieser BERICHT umfaßt insgesamt 5 Blätter einschließlich dieses Deckblatts.
☐ Außerdem liegen dem Bericht ANLAGEN bei; dabei handelt es sich um Blätter mit Beschreibungen, Ansprüchen und/oder Zeichnungen, die geändert wurden und diesem Bericht zugrunde liegen, und/oder Blätter mit vor dieser Behörde vorgenommenen Berichtigungen (siehe Regel 70.16 und Abschnitt 607 der Verwaltungsrichtlinien zum PCT).

Diese Anlagen umfassen insgesamt Blätter.

3. Dieser Bericht enthält Angaben zu folgenden Punkten:

- I ☒ Grundlage des Bescheids
- II ☐ Priorität
- III ☐ Keine Erstellung eines Gutachtens über Neuheit, erfinderische Tätigkeit und gewerbliche Anwendbarkeit
- IV ☐ Mangelnde Einheitlichkeit der Erfindung
- V ☒ Begründete Feststellung nach Regel 66.2 a)ii) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung
- VI ☐ Bestimmte angeführte Unterlagen
- VII ☐ Bestimmte Mängel der internationalen Anmeldung
- VIII ☐ Bestimmte Bemerkungen zur internationalen Anmeldung

Datum der Einreichung des Antrags 05.12.2003	Datum der Fertigstellung dieses Berichts 04.02.2004
Name und Postanschrift der mit der internationalen Prüfung beauftragten Behörde  Europäisches Patentamt D-80298 München Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Bevollmächtigter Bediensteter Forciniti, M Tel. +49 89 2399-7903 

I. Grundlage des Berichts

1. Hinsichtlich der **Bestandteile** der internationalen Anmeldung (*Ersatzblätter, die dem Anmeldeamt auf eine Aufforderung nach Artikel 14 hin vorgelegt wurden, gelten im Rahmen dieses Berichts als "ursprünglich eingereicht" und sind ihm nicht beigelegt, weil sie keine Änderungen enthalten (Regeln 70.16 und 70.17)*):

Beschreibung, Seiten

1-6 in der ursprünglich eingereichten Fassung

Ansprüche, Nr.

1-3 in der ursprünglich eingereichten Fassung

Zeichnungen, Blätter

1/2-2/2 in der ursprünglich eingereichten Fassung

2. Hinsichtlich der **Sprache**: Alle vorstehend genannten Bestandteile standen der Behörde in der Sprache, in der die internationale Anmeldung eingereicht worden ist, zur Verfügung oder wurden in dieser eingereicht, sofern unter diesem Punkt nichts anderes angegeben ist.

Die Bestandteile standen der Behörde in der Sprache: zur Verfügung bzw. wurden in dieser Sprache eingereicht; dabei handelt es sich um:

- ☐ die Sprache der Übersetzung, die für die Zwecke der internationalen Recherche eingereicht worden ist (nach Regel 23.1(b)).
- ☐ die Veröffentlichungssprache der internationalen Anmeldung (nach Regel 48.3(b)).
- ☐ die Sprache der Übersetzung, die für die Zwecke der internationalen vorläufigen Prüfung eingereicht worden ist (nach Regel 55.2 und/oder 55.3).

3. Hinsichtlich der in der internationalen Anmeldung offenbarten **Nucleotid- und/oder Aminosäuresequenz** ist die internationale vorläufige Prüfung auf der Grundlage des Sequenzprotokolls durchgeführt worden; das:

- ☐ in der internationalen Anmeldung in schriftlicher Form enthalten ist.
- ☐ zusammen mit der internationalen Anmeldung in computerlesbarer Form eingereicht worden ist.
- ☐ bei der Behörde nachträglich in schriftlicher Form eingereicht worden ist.
- ☐ bei der Behörde nachträglich in computerlesbarer Form eingereicht worden ist.
- ☐ Die Erklärung, daß das nachträglich eingereichte schriftliche Sequenzprotokoll nicht über den Offenbarungsgehalt der internationalen Anmeldung im Anmeldezeitpunkt hinausgeht, wurde vorgelegt.
- ☐ Die Erklärung, daß die in computerlesbarer Form erfassten Informationen dem schriftlichen Sequenzprotokoll entsprechen, wurde vorgelegt.

4. Aufgrund der Änderungen sind folgende Unterlagen fortgefallen:

- ☐ Beschreibung, Seiten:
- ☐ Ansprüche, Nr.:
- ☐ Zeichnungen, Blatt:

**INTERNATIONALER VORLÄUFIGER
PRÜFUNGSBERICHT**

Internationales Aktenzeichen . PCT/EP 03/04501

5. ☐ Dieser Bericht ist ohne Berücksichtigung (von einigen) der Änderungen erstellt worden, da diese aus den angegebenen Gründen nach Auffassung der Behörde über den Offenbarungsgehalt in der ursprünglich eingereichten Fassung hinausgehen (Regel 70.2(c)).

(Auf Ersatzblätter, die solche Änderungen enthalten, ist unter Punkt 1 hinzuweisen; sie sind diesem Bericht beizufügen.)

6. Etwaige zusätzliche Bemerkungen:

V. Begründete Feststellung nach Artikel 35(2) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung

1. Feststellung

Neuheit (N)

Ja: Ansprüche 1-3

Nein: Ansprüche

Erfinderische Tätigkeit (IS)

Ja: Ansprüche 1-3

Nein: Ansprüche

Gewerbliche Anwendbarkeit (IA)

Ja: Ansprüche: 1-3

Nein: Ansprüche:

2. Unterlagen und Erklärungen:

siehe Beiblatt

Zu Punkt V.

Begründete Feststellung nach Regel 66.2(a)(ii) hinsichtlich der Neuheit, der erfinderischen Tätigkeit und der gewerblichen Anwendbarkeit; Unterlagen und Erklärungen zur Stützung dieser Feststellung

V.1 Es wird auf die folgenden Dokumente verwiesen:

D1: DE 1 281 981 B

V.1 **Anspruch 1** ist zumindest teilweise unklar (Artikel 3 PCT):

V.1.1 Im Kennzeichen dieses Anspruchs wird das Merkmal eines "**Axial- Stützlagers**" weiter ausgebaut, das zuvor nicht näher definiert wurde. Im Oberbegriff ist lediglich von einem Stützlager die Rede.

V.1.2 Das Merkmal "**das Axial-Stützlager zylindrisches und fließendes Zwischengehäuse (ZG)**" im Kennzeichen ist nur mit Blick auf die Figuren und auf die Beschreibung (siehe insbesondere Seite 3, Zeile 16) verständlich.

V.1.3 Für die Betrachtungen bezüglich Neuheit und erfinderischer Tätigkeit wird deshalb von einem gemäß den folgenden Ausführungen klargestellten Anspruchswortlaut (siehe **V.2**) ausgegangen. Die eingeführten Änderungen sind in fetter und unterstrichener Schrift dargestellt:

Vorrichtung zur gesteuerten Beeinflussung der Aufliegestützkkräfte von Andruckrollen, insbesondere von, auf Arbeitswalzen aufliegenden Stützwalzen (SW), deren, in einem Lagertraggehäuse bzw. dem Lagereinbaustück der Walzen eines Walzgerüsts in Rollen- oder Gleitlagern lagernde Zapfen (WZ) einen Zapfenansatz (ZA) aufweisen, der in einem **Axial-** Stützlager lagert, dessen Lagergehäuse (LG) außenseitig an das Lagertraggehäuse der Andruckrollen bzw. Lagereinbaustück der Stützwalzen (LS) angesetzt ist, gekennzeichnet durch,
ein, in das Lagergehäuse (LG) eingesetztes, das Axial-Stützlager **zylindrisch umschließendes** Zwischengehäuse (ZG), das von einem Kolbenzylinder-Aggregat (RB, SK) beaufschlagt, in dem Lagergehäuse radial zur Achse des Zapfenansatzes (**ZA**) stellverschiebbar ist.

V.2 Klargestellter Anspruch 1 ist aus folgenden Gründen neu (Artikel 33(2) PCT):

Dokument **D1** offenbart eine:

Vorrichtung zur gesteuerten Beeinflussung der Aufliegestützkräfte von Andruckrollen, insbesondere von, auf Arbeitswalzen (14) aufliegenden Stützwalzen (16), deren, in einem Lagertraggehäuse bzw. dem Lagereinbaustück (17) der Walzen eines Walzgerüsts in Rollen- oder Gleitlagern lagemde Zapfen (siehe Fig. 2) einen Zapfenansatz (siehe Fig. 2) aufweisen, der in einem Axial- Stützlager (siehe Fig. 2) lagert, dessen Lagergehäuse (20) außenseitig an das Lagertraggehäuse der Andruckrollen bzw. Lagereinbaustück der Stützwalzen (16) angesetzt ist.

Der Gegenstand des **Anspruch 1** unterscheidet sich von der **D1** durch:

- (i) Ein in das Lagergehäuse eingesetztes, das Axial-Stützlager zylindrisch umschließendes Zwischengehäuse, das von einem Kolbenzylinder-Aggregat beaufschlagt, in dem Lagergehäuse radial zur Achse des Zapfenansatzes stellverschiebbar ist.

V.3 Die Merkmale gemäß (i) lösen in nicht naheliegender Weise die Aufgabe, die gesamte Anordnung niedriger und somit leichter ausführen zu können (Artikel 33(3) PCT).

V.4 Die abhängigen **Ansprüche 2 bis 3** stellen weitere Ausführungsformen des Gegenstandes von **Anspruch 1** dar und erfüllen somit ebenfalls die Bedingungen des PCT hinsichtlich Neuheit und erfinderischer Tätigkeit (Artikel 33(2)(3) PCT).

V.5 Der Gegenstand der **Ansprüche 1 bis 3** ist ohne Zweifel gewerblich anwendbar (Art. 33(4) PCT).

TRANSLATION (HM-605PCT -- IPER):

TREATY ON INTERNATIONAL COOPERATION IN THE AREA OF PATENTS

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT (Article 36 and Rule 70 of the PCT)

Applicant's or Agent's File Ref. 40 890.h.nb	FOR FURTHER ACTION	See Notification of Transmittal of the International Preliminary Examination Report (Form PCT/IPEA/416).
International Application No. PCT/EP03/04501	International Filing Date (<i>Month/Day/Year</i>)	Priority Date (<i>Month/Day/Year</i>) May 29, 2002
International Patent Classification (IPC) or National Classification and IPC B21B29/00		
Applicant SMS DEMAG AKTIENGESELLSCHAFT et al.		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 pages, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., pages of the description, claims, and/or drawings which have been amended and are the basis for this report and/or pages containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of pages.</p>																								
<p>3. This report contains indications relating to the following items:</p> <table><tr><td>I</td><td><input checked="" type="checkbox"/></td><td>Basis of the report</td></tr><tr><td>II</td><td><input type="checkbox"/></td><td>Priority</td></tr><tr><td>III</td><td><input type="checkbox"/></td><td>Non-establishment of opinion with regard to novelty, inventive activity, or commercial viability.</td></tr><tr><td>IV</td><td><input type="checkbox"/></td><td>Lack of unity of invention.</td></tr><tr><td>V</td><td><input checked="" type="checkbox"/></td><td>Substantiated determination under Rule 66.2 a(ii) with regard to novelty, inventive activity, and commercial viability; citations and explanations supporting such statement.</td></tr><tr><td>VI</td><td><input type="checkbox"/></td><td>Certain documents cited</td></tr><tr><td>VII</td><td><input type="checkbox"/></td><td>Certain defects in the international application</td></tr><tr><td>VIII</td><td><input type="checkbox"/></td><td>Certain observations on the international application</td></tr></table>	I	<input checked="" type="checkbox"/>	Basis of the report	II	<input type="checkbox"/>	Priority	III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive activity, or commercial viability.	IV	<input type="checkbox"/>	Lack of unity of invention.	V	<input checked="" type="checkbox"/>	Substantiated determination under Rule 66.2 a(ii) with regard to novelty, inventive activity, and commercial viability; citations and explanations supporting such statement.	VI	<input type="checkbox"/>	Certain documents cited	VII	<input type="checkbox"/>	Certain defects in the international application	VIII	<input type="checkbox"/>	Certain observations on the international application
I	<input checked="" type="checkbox"/>	Basis of the report																						
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III	<input type="checkbox"/>	Non-establishment of opinion with regard to novelty, inventive activity, or commercial viability.																						
IV	<input type="checkbox"/>	Lack of unity of invention.																						
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VI	<input type="checkbox"/>	Certain documents cited																						
VII	<input type="checkbox"/>	Certain defects in the international application																						
VIII	<input type="checkbox"/>	Certain observations on the international application																						

Date of submission of the petition: December 5, 2003	Date of completion of this report: February 4, 2004
Name and mailing address of the office assigned to perform the international preliminary examination: European Patent Office D-80298 Munich Tel: +49 89 2399-0 Tx: 523656 epmu d Fax: +49 89 2399-4465	Authorized Officer: Forciniti, M. Tel: +49 89 2399-7903

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International File No.: **PCT/EP03/04501**

I. Basis of the Report

1. With regard to the **constituent parts** of the international application (*replacement pages which were submitted to the application office in compliance with a request according to Article 14 are considered "originally filed" in the context of this report and are not attached to the report, because they do not contain any changes (Rules 70.16 and 70.17)*):

Specification, pages:

1-6 as originally filed

Claims, Nos.:

1-3 as originally filed

Drawings, Pages:

1/2-2/2 as originally filed

2. With respect to the **language**, all the constituent parts marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise cited under this item.

The constituent parts were available or furnished to this Authority in the following language: which is:

- ☐ the language of a translation furnished for the purpose of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purpose of international preliminary examination (under Rule 55.2 and/or Rule 55.3).

3. With regard to the **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer-readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer-readable form.

- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer-readable form is identical to the written listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets/figures:

5. ☐ This report has been prepared as if (some of) the amendments had not been made, since for the specified reasons they are considered by this Authority to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Any additional remarks:

V. Substantiated determination according to Article 35(2) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination.

1. Determination

Novelty (N)	Yes: Claims 1-3
	No: Claims
Inventive Activity (AI):	Yes: Claims 1-3
	No: Claims
Commercial Viability (CV):	Yes: Claims 1-3
	No: Claims

2. Documents and Declarations

See attached page.

INTERNATIONAL PRELIMINARY

EXAMINATION REPORT – ATTACHED PAGE

International File No.: **PCT/EP03/04501**

Re Point V

Substantiated determination according to Rule 66.2(a)(ii) with respect to novelty, inventive activity, and commercial viability; documents and declarations in support of this determination.

V.1 The following documents are cited:

D1: DE 1 281 981 B

V.1 **Claim 1** is at least partially unclear (Article 3 PCT):

V.1.1 In the characterizing clause of this claim, the feature of an **“axial support bearing”**, which was not defined in detail earlier, is further developed. In the introductory clause, only a support bearing is spoken of.

V.1.2 The feature **“das Axial-Stützlager zylindrisches und fließendes Zwischengehäuse (ZG)”** in the characterizing clause can be comprehended only by referring to the drawings and to the specification (see especially page 3, line 16).

V.1.3 Therefore, for the purpose of analysis with respect to novelty and inventive activity, we will proceed on the basis of the following clarified wording of Claim 1. The changes that have been made appear in boldface and/or are underlined:

Device for controlling the contact pressure of contact rolls, especially backup rolls (SW) resting on work rolls, whose neck (WZ), which is supported in roller bearings or journal bearings in a bearing support housing or the bearing chock of the rolls of a roll stand, has a neck extension

(ZA), which is supported in an axial support bearing, whose bearing housing (LG) is connected externally to the bearing support housing of the contact rolls or to the bearing chock (LS) of the backup rolls, characterized by an intermediate housing (ZG), which is inserted into the bearing housing (LG) and **cylindrically encloses** the axial support bearing, and **which**, when actuated by a piston-cylinder unit (RB, SK), can be adjustably displaced in the bearing housing in the radial direction relative to the axis of the neck extension (ZA).

V.2 Clarified **Claim 1** is novel for the following reasons (Article 33(2) PCT):

Document **D1** discloses a:

Device for controlling the contact pressure of contact rolls, especially backup rolls (16) resting on work rolls (14), whose neck, which is supported in roller bearings or journal bearings in a bearing support housing or the bearing chock (17) of the rolls of a roll stand, has a neck extension (see Figure 2), which is supported in an axial support bearing (see Figure 2), whose bearing housing (20) is connected externally to the bearing support housing of the contact rolls or to the bearing chock of the backup rolls (16).

The object of **Claim 1** differs from that of **D1** by:

(i) an intermediate housing, which is inserted into the bearing housing and cylindrically encloses the axial support bearing, and which, when actuated by a piston-cylinder unit, can be adjustably displaced in the bearing housing in the radial direction relative to the axis of the neck extension.

V.3 The features in accordance with (i) solve in a nonobvious way the problem of being able to construct the overall installation so that it is both shorter and lighter (Article 33(3) PCT).

V.4 Dependent **Claims 2 to 3** represent additional embodiments of the object of **Claim 1** and thus also satisfy the conditions of the PCT with respect to novelty and inventive activity (Article 33(2)(3) PCT).

V.5 The object of **Claims 1 to 3** is without doubt commercially viable (Art. 33(4) PCT).